CONTENTS OF VOLUME 52

Number 1

Graphical Abstracts vii

Growth and Metabolism

A thermostable diamine oxidase from *Vigna radiata* seedlings 1 A. Choudhary, I. Singh and R. P. Singh

Purification and characterization of a cellulase from *Catharanthus roseus* stems 7 Smriti and G. G. Sanwal

Anthocyanidin 3-glucoside malonyltransferase from *Dahlia variabilis* 15 M.-A. Yamaguchi, N. Oshida, M. Nakayama, M. Koshioka, Y. Yamaguchi and I. Ino

Caffeine in *Citrus* flowers 19 J. A. Kretschmar and T. W. Baumann

Ecological Biochemistry

α-Amino acids from a mushroom, *Amanita castanopsidis Hongo*, with growth-inhibiting activity 25 H. Yoshimura, K. Takegami, M. Doe, T. Yamashita, K. Shibata, K. Wakabayashi, K. Soga and S. Kamisaka

Glucosinolates in cauliflower as biochemical markers for resistance against downy mildew 29 R. Ménard, J.-P. Larue, D. Silué and D. Thouvenot

Methoxybifurcarenone: an antifungal and antibacterial meroditerpenoid from the brown alga *Cystoseira tamariscifolia* 37 A. Bennamara, A. Abourriche, M. Berrada, M. Charrouf, N. Chaib, M. Boudouma and F. X. Garneau

Isolation of a phytoalexin, *trans-p*-coumaryl aldehyde, from *Cucurbita maxima*, Cucurbitaceae 41 R. R. Stange Jr., J. J. Sims, S. L. Midland and R. E. McDonald

Biosynthesis

Dihydrocinnamic acids are involved in the biosynthesis of phenylphenalenones in *Anigozanthos preissii* 45 B. Schmitt and B. Schneider

Biosynthesis of triacylglycerols by developing sunflower seed microsomes 55 S. Triki, C. Demandre and P. Mazliak

Chemotaxonomy

An amide of l-*threo*-γ-hydroxyglutamic acid from *Justicia ghiesbreghtiana* 63 P. Lorenz, F. R. Stermitz and L. D. Ismail

Iridoid glucosides—chemotaxonomic markers in Loasoideae 67 A. A. Müller, J. K. Kufer, K. G. Dietl, S. A. Reiter, J. Grau and M. Weigend

Sesquiterpene lactones in *Blainvillea rhomboidea* 79 O. Spring, R. Zipper, B. Vogler, J. L. C. Lopes, W. Vichnewski, D. A. Dias and W. R. Cunha

Bioactive Plant Products

Six diprenylisoflavones, derrisisoflavones A–F, from *Derris scandens* 87 T. Sekine, M. Inagaki, F. Ikegami, Y. Fujii and N. Ruangrungsi

Quinoline alkaloids from *Acronychia laurifolia* 95 B. Cui, H. Chai, Y. Dong, F. D. Horgen, B. Hansen, D. A. Madulid, D. D. Soejarto, N. R. Farnsworth, G. A. Cordell, J. M. Pezzuto and A. D. Kinghorn

Plant Chemistry

Sesquiterpene constituents of the liverwort *Bazzania trilobata* 99 U. Warmers and W. A. König

Terpenoid constituents of the liverwort *Reboulia hemisphaerica* 105 M. Toyota, M. Konoshima and A. Yoshinori

Sesquiterpene lactones from *Carpesium triste* var. *manshuricum* 113 M. R. Kim, B. R. Suh, J. G. Kim, Y. H. Kim, D. K. Kim and D. C. Moon

Diterpenes and aromatic compounds from *Euphorbia fischeriana* 117 C.-T. Che, T.-X. Zhou, Q.-G. Ma, G.-W. Qin, I. D. Williams, H.-M. Wu and Z.-S. Shi

Triterpenoids from *Turraea holstii* 123 D. A. Mulholland, T. V. Monkhe, D. A. H. Taylor and M. S. Rajab

0031-9422/00/$ - see front matter © 2000 Elsevier Science Ltd. All rights reserved.
PII: S0031-9422(00)00092-3

11β,12β-Diacetoxyharrisonin, a tetranortriterpenoid from *Harrisonia abyssinica* 127 M. S. Rajab, F. R. Fronczek, D. A. Mulholland and J. K. Rugutt

Three minor carotenoids from annatto (*Bixa orellana*) seeds 135 A. Z. Mercadante, A. Steck and H. Pfander

Flavonoids from *Maclura tinctoria* 141 H. N. El-Sohly, A. Joshi, X.-C. Li and S. A. Ross

Two acylated flavone glucosides from *Andrographis serpyllifolia* 147 A. G. Damu, B. Jayaprakasam, D. Gunasekar, A. Blond and B. Bodo

Number 2

Graphical Abstracts vii

Review Articles

Advances in structural elucidation of glucuronide oleanane-type triterpene carboxylic acid 3,28-*O*-bisdesmosides (1962–1997) 153 N. Tan, J. Zhou and S. Zhao

Biosynthesis and metabolism of ascorbic acid in plants and of analogs of ascorbic acid in fungi 193 F. A. Loewus

Growth and Metabolism

Interaction between chitosomes and concanavalin A 211 R. A. Merz, M. Horsch, H. P. Ruffner and D. M. Rast

Methionine-induced stabilization of Bowman–Birk protease inhibitor mRNA 225 Y. Cheng, J. T. Madison and J. F. Thompson

Degradation of Bowman-Birk protease inhibitor mRNA with a cell-free extract 233 Y. Cheng, J. F. Thompson and J. T. Madison

Purification and characterization of a protein phosphatase from winged bean 239 S. Ganguly and M. Singh

Amine distribution and content in several parts of the subantarctic endemic species *Lyallia kerguelensis* (Hectorellaceae) 247 F. Hennion and J. Martin-Tanguy

Ecological Biochemistry

Thapsakins: possible biogenetic intermediates towards insecticidal cyclopenta[*b*]benzofurans from *Aglaia edulis* 253 M. Bacher, O. Hofer, G. Brader, S. Vajrodaya and H. Greger

Two 6-substituted 5,6-dihydro-α-pyrones from *Ravensara anisata* 265 J. O. Andrianaivoravelona, S. Sahpaz, C. Terreaux, K. Hostettmann, H. Stoeckli-Evans and J. Rasolondramanitra

An antifungal compound from roots of Welsh onion 271 N. Phay, T. Higashiyama, M. Tsuji, H. Matsuura, Y. Fukushi, A. Yokota and F. Tomita

Biosynthesis

Biosynthesis of carotenoids in bittermelon at high temperature 275 T. L. Huong Tran and L. C. Raymundo

Structures of 5-alkylresorcinol-related analogues in rye 281 Y. Suzuki, Y. Esumi and I. Yamaguchi

Cell Culture

Microbial hydroxylation of natural drimenic lactones 291 M. Maurs, R. Azerad, M. Cortès, G. Aranda, M. B. Delahaye and L. Ricard

Chemotaxonomy

Biflavonoids and 4,2′-epoxy-3-phenylcoumarins from the moss *Mnium hornum* 297 E. Brinkmeier, H. Geiger and H. D. Zinsmeister

Bioactive Plant Products

Antioxidants from *Lespedeza homoloba*. (I) 303 T. Miyase, M. Sano, H. Nakai, M. Muraoka, M. Nakazawa, M. Suzuki, K. Yoshino, Y. Nishihara and J. Tanai

Antioxidants from *Lespedeza homoloba* (II) 311 T. Miyase, M. Sano, K. Yoshino and K. Nonaka

Ancistrobertsonines B, C, and D as well as 1,2-didehydroancistrobertsonine D from *Ancistrocladus robertsoniorum* 321 G. Bringmann, F. Teltschik, M. Michel, S. Busemann, M. Rückert, R. Haller, S. Bär, S. A. Robertson and R. Kaminsky

Plant Chemistry

Two novel triterpenoids from the stemwood of *Herrania cuatrecasana* 333 B. Wiedemann, H. Lerche, H. Lotter, A. Neszmelyi, H. Wagner and A. A. Müller

Phenylpropanoids and neolignans from *Piper regnellii* 339 P. J. C. Benevides, P. Sartorelli and M. J. Kato

2,3-Dihydrobenzofuran neolignans from *Aristolochia pubescens* 345 I. R. Nascimento and L. M. X. Lopes

Acylated malvidin 3-rutinosides in dusky violet flowers of *Petunia integrifolia* subsp. *inflata* 351 F. Tatsuzawa, T. Ando, N. Saito, K. Yoda, H. Kokubun, H. Watanabe, G. Hashimoto, K. Asakura, R. Hara and H. Seki

Isobutylamides from the fruit of *Zanthoxylum integrifoliolum* 357 I.-S. Chen, T.-L. Chen, W.-Y. Lin, I.-L. Tsai and Y.-C. Chen

Number 3

Graphical Abstracts vii

Growth and Metabolism

Purification and properties of a protein from *Lantana camara* activating *Cuscuta reflexa* cellulase 361 U. Chatterjee and G. G. Sanwal

Low temperature-induced accumulation of eicosapentaenoic acids in *Marchantia polymorpha* cells 367 M. Saruwatari, S. Takio and K. Ono

Biosynthesis

Biosynthesis of *Erythrina* alkaloids in *Erythrina crista-galli* 373 U. H. Maier, W. Rödl, B. Deus-Neumann and M. H. Zenk

Ecological Biochemistry

Guaianolides from *Centaurea nicolai*: antifungal activity 383 V. Vajs, N. Todorović, M. Ristić, V. Tešević, B. Todorović, P. Janaćković, P. Marin and S. Milosavljević

Cell Culture and Biotechnology

α-D-Mannopyranosyl-(1→4)-α-D-glucuronopyranosyl-(1→2)-*myo*-inositol, a new and unusual oligosaccharide from cultured rose cells 387 C. K. Smith, C. M. Hewage, S. C. Fry and I. H. Sadler

The biotransformation of *ent*-kaur-16-en-19-oic acid by *Rhizopus stolonifer* 397 E. A. Silva, J. A. Takahashi, M. A. D. Boaventura and A. B. Oliveira

Xanthones from the cultured lichen mycobionts of *Pyrenula japonica* and *Pyrenula pseudobufonia* 401 T. Tanahashi, Y. Takenaka, Y. Ikuta, K. Tani, N. Nagakura and N. Hamada

Chemotaxonomy

Fourier Transform Infrared microspectroscopy and chemometrics as a tool for the discrimination of cyanobacterial strains 407 M. Kansiz, P. Heraud, B. Wood, F. Burden, J. Beardall and D. McNaughton

Δ^6-Unsaturated fatty acids in species and tissues of the Primulaceae 419 O. Sayanova, J. A. Napier and P. R. Shewry

Chemotaxonomic significance of fatty acids and tocopherols in Boraginaceae 423 L. Velasco and F. D. Goffman

Chemotaxonomy of *Taxus* 427 E. L. M. van Rozendaal, S. J. L. Kurstjens, T. A. van Beek and R. G. van den Berg

Bioactive Plant Products

Saundersiosides C–H, rearranged cholestane glycosides from the bulbs of *Ornithogalum saundersiae* and their cytostatic activity on HL-60 cells 435 M. Kuroda, Y. Mimaki and Y. Sashida

Cholestane rhamnosides from the bulbs of *Ornithogalum saundersiae* 445 M. Kuroda, Y. Mimaki and Y. Sashida

Bioactive naphthoquinones from *Cordyceps unilateralis* 453 P. Kittakoop, J. Punya, P. Kongsaeree, Y. Lertwerawat, A. Jintasirikul, M. Tanticharoen and Y. Thebtaranonth

Plant Chemistry

Three pyrrolyloctatetraenyl-α-pyrones from *Auxarthron conjugatum* 459 T. Hosoe, K. Fukushima, K. Takizawa, M. Miyaji and K.-ichi Kawai

Partially acetylated tri- and tetrarhamnoside dodecanyl ether derivatives from *Cleistopholis patens* 465 V. Seidel, F. Bailleul and P. G. Waterman

Longipinene derivatives from *Stevia porphyrea*	473	E. Sánchez-Arreola, C. M. Cerda-García-Rojas, L. U. Román, J. D. Hernández and P. Joseph-Nathan
Jatrophane and tigliane diterpenes from the latex of *Euphorbia obtusifolia*	479	J. A. Marco, J. F. Sanz-Cervera, J. Checa, E. Palomares and B. M. Fraga
Nine new clerodane diterpenoids from rhizomes of *Solidago altissima*	487	M. Tori, A. Katto and M. Sono
Spatozoate and varninasterol from the brown alga *Spatoglossum variabile*	495	Atta-ur-Rahman, M. I. Choudhary, S. Hayat, A. M. Khan, A. Ahmad and S. Malik
Ptychantols A–C, macrocyclic bis(bibenzyls), possessing a *trans*-stilbene structure from the liverwort *Ptychanthus striatus*	501	T. Hashimoto, H. Ikeda, S. Takaoka, M. Tanaka and Y. Asakawa
Coumarins, limonoids and an alkaloid from *Clausena excavata*	511	T. T. Thuy, H. Ripperger, A. Porzel, T. Van Sung and G. Adam
An acetylated anthocyanin from the blue petals of *Salvia uliginosa*	517	T. Ishikawa, T. Kondo, T. Kinoshita, H. Haruyama, S. Inaba, K. Takeda, R. J. Grayer and N. C. Veitch
Alkaloidal and other constituents from the root bark of *Clausena excavata*	523	T.-S. Wu, S.-C. Huang, P.-L. Wu and C.-S. Kuoh
Tropane alkaloids from *Darlingia darlingiana*	529	P. L. Katavic, M. S. Butler, R. J. Quinn, P. I. Forster and G. P. Guymer
Alkaloids from *Crinum bulbispermum*	533	E. E. Elgorashi, S. E. Drewes and J. Van Staden
Maculalactone L and three halogenated carbazole alkaloids from *Kyrtuthrix maculans*	537	S.-C. Lee, G. A. Williams and G. D. Brown
Book Reviews		
Tree Biotechnology: Towards the Millenium, edited by M. R. Davey, P. G. Alderson, K. C. Lowe and J. B. Power	541	J. R. Barnett
Brassinosteroids, A New Class of Plant Hormone, by V. A. Khripach, V. N. Zhabinskii and A. E. de Groot	542	J. B. Harborne
Basic One- and Two-Dimensional NMR Spectroscopy, by H. Friebolin	542	V. Wray
Announcement	I	

Number 4

Graphical Abstracts	vii	
Growth and Metabolism		
Localization of hydrogen peroxide production in *Zinnia elegans* L. stems	545	L. Liu, K. E. L. Eriksson and J. F. D. Dean
Carbon isotope ratios of amylose, amylopectin and mutant starches	555	M. P. Scott, J.-L. Jane and M. Soundararajan
Lipid class and fatty acid composition of *Pseudo-nitzschia multiseries* and *Pseudo-nitzschia pungens* and effects of lipolytic enzyme deactivation	561	S. M. Budge and C. C. Parrish
Regio- and enantioselective oxidation of thiaoleic acids by an algal Δ12-desaturase	567	L. Fauconnot, C. Nugier-Chauvin, N. Noiret, S. Poulain and H. Patin
Biochemical characterization of partially purified gaba:pyruvate transaminase from *Nicotiana tabacum*	575	O. R. Van Cauwenberghe and B. J. Shelp
Light-induced betacyanin and flavonol accumulation in bladder cells of *Mesembryanthemum crystallinum*	583	T. Vogt, M. Ibdah, J. Schmidt, V. Wray, M. Nimtz and D. Strack
Ecological Biochemistry		
New tricycloalternarenes produced by the phytopathogenic fungus *Alternaria alternata*	593	R.-P. Nussbaum, W. Günther, S. Heinze and B. Liebermann
Volatiles from *Trifolium* as feeding deterrents of redlegged earth mites	601	S. Wang, E. L. Ghisalberti and J. Ridsdill-Smith
Epicuticular waxes and volatiles from faba bean (*Vicia faba*) flowers	607	D. W. Griffiths, G. W. Robertson, T. Shepherd and G. Ramsay

Allelochemicals from sunflower leaves cv. Peredovick 613 F. A. Macías, R. M. Oliva, R. M. Varela, A. Torres and J. M. G. Molinillo

Triterpene phytoalexins from nectarine fruits 623 H. El Lahlou, N. Hirai, M. Tsuda and H. Ohigashi

Cell Culture and Biotechnology

The microbiological hydroxylation of some 2,9-dioxygenated clovanes by *Mucor plumbeus* 631 S. F. Arantes, J. R. Hanson and D. J. Mobbs

The microbiological hydroxylation of the sesquiterpenoid patchoulol by *Mucor plumbeus* 635 S. F. Arantes, J. R. Hanson and P. B. Hitchcock

Chemotaxonomy

Chemical composition and production of exopolysaccharides from representative members of heterocystous and non-heterocystous cyanobacteria 639 B. Nicolaus, A. Panico, L. Lama, I. Romano, M. C. Manca, A. De Giulio and A. Gambacorta

A chemosystematic investigation on the mono- and sesquiterpenoids in the genus *Origanum* (Labiatae) 649 M. Skoula, P. Gotsiou, G. Naxakis and C. B. Johnson

Sterols of four dinoflagellates from the genus *Prorocentrum* 659 J. K. Volkman, W. I. C. Rijpstra, J. W. de Leeuw, M. P. Mansour, A. E. Jackson and S. I. Blackburn

Bioactive Plant Products

Cytotoxic constituents from the roots of *Tovomita brevistaminea* 669 E.-K. Seo, M. E. Wall, M. C. Wani, H. Navarro, R. Mukherjee, N. R. Farnsworth and A. D. Kinghorn

Plant Chemistry

Trisaccharides from *Marsdenia roylei* 675 A. Kumar, A. Khare and N. K. Khare

1-[2',4'-Dihydroxy-3'-(3''-Methylbut-2''-enyl)-5'-(1'''-ethoxy-3'''-methylbutyl)-6'-methoxy]phenylethanone from *Acronychia pedunculata* 681 L.-K. Sy and G. D. Brown

Three *p*-cymene derivatives from *Zataria multiflora* 685 M. S. Ali, M. Saleem, F. Akhtar, M. Jahangir, M. Parvez and V. U. Ahmad

A revision of the positive sign of the optical rotation and its maximum value of α-eudesmol 689 M. Toyota, Y. Yonehara, I. Horibe, K. Minagawa and Y. Asakawa

Sesquiterpene constituents of the liverwort *Calypogeia fissa* 695 U. Warmers and W. A. König

Limonoids from *Astrotrichilia voamatata* 705 D. A. Mulholland, S. L. Schwikkard and M. Randrianarivelojosia

Limonoids from *Melia toosendan* 709 M. Nakatani, M. Shimokoro, J.-B. Zhou, H. Okamura, T. Iwagawa, K. Tadera, N. Nakayama and H. Naoki

Triterpenoidal saponins from *Gleditsia sinensis* 715 Z. Zhang, K. Koike, Z. Jia, T. Nikaido, D. Guo and J. Zheng

Flavonoids from the root-bark of *Dioclea grandiflora* 723 T. Jenkins, J. Bhattacharyya, G. Majetich, Q. Teng, A. M. de Fatima and R. Almeida

Dorsilurins C, D and E, three prenylated flavonoids from the roots of *Dorstenia psilurus* 731 B. T. Ngadjui, T. K. Tabopda, E. Dongo, G. W. F. Kapche, P. Sandor and B. M. Abegaz

Structure and synthesis of butiniflavan-epicatechin and -epigallocatechin probutinidins 737 J. Coetzee, L. Mciteka, E. Malan and D. Ferreira

Book Reviews

Immunomodulatory Agents from Plants, edited by H. Wagner 745 J. B. Harborne

Plant Amino Acids — Biochemistry and Biotechnology, edited by Bijay K. Singh 745 D. Strack

Naturally Occurring Glycosides, edited by Raphael Ikan 746 T. Vogt

Corrigenda and Addenda 749 L. Kraut

Announcement I

Number 5

Graphical Abstracts vii

Growth and Metabolism

An isolectin complex from *Trichosanthes anguina* seeds 751 P. Anuradha and S. V. Bhide

Resistance factors to grey mould in grape berries: identification of some phenolics inhibitors of *Botrytis cinerea* stilbene oxidase 759 G. Goetz, A. Fkyerat, N. Métais, M. Kunz, R. Tabacchi, R. Pezet and V. Pont

Action of diverse peroxidases and laccases on six cell wall-related phenolic compounds 769 G. Wallace and S. C. Fry

Does *N*-hydroxyglycine inhibit plant and fungal laccases? 775 J. Zhang, R. Kjonaas and W. H. Flurkey

A survey of the nature of glucose acylation reactions in plant extracts 785 G. S. Ghangas

Flavanone-7-*O*-glucosyltransferase activity from *Petunia hybrida* 793 R. L. Durren and C. A. McIntosh

Changes in Kennedy pathway intermediates associated with increased triacylglycerol synthesis in oil-seed rape 799 H. J. Perry, R. Bligny, E. Gout and J. L. Harwood

Dehydrozaluzanin C, a natural sesquiterpenolide, causes rapid plasma membrane leakage 805 J. C. G. Galindo, A. Hernández, F. E. Dayan, M. R. Tellez, F. A. Macías, R. N. Paul and S. O. Duke

2,3,5-Tri-*epi*-brassinolide: preparation and biological activity in rice lamina inclination test 815 H. Seto, S. Fujioka, H. Koshino, T. Suenaga, S. Yoshida, T. Watanabe and S. Takatsuto

Developmental changes in cell-wall ferulate and dehydrodiferulates in sugar beet 819 G. Wende, K. W. Waldron, A. C. Smith and C. T. Brett

Ecological Biochemistry

The phytoalexins desoxyhemigossypol and hemigossypol are elicited by *Xanthomonas* in *Gossypium* cotyledons 829 K. J. Abraham, M. L. Pierce and M. Essenberg

New insecticidal rocaglamide derivatives from flowers of *Aglaia duperreana* (Meliaceae) 837 Chaidir, J. Hiort, B. W. Nugroho, F. I. Bohnenstengel, V. Wray, L. Witte, P. D. Hung, L. C. Kiet, W. Sumaryono and P. Proksch

Biosynthesis

Amorpha-4,11-diene synthase catalyses the first probable step in artemisinin biosynthesis 843 H. J. Bouwmeester, T. E. Wallaart, M. H. A. Janssen, B. van Loo, B. J. M. Jansen, M. A. Posthumus, C. O. Schmidt, J.-W. De Kraker, W. A. König and M. C. R. Franssen

Metabolism of *N*-alkyldiamines and *N*-alkylnortropinones by transformed root cultures of *Nicotiana* and *Brugmansia* 855 H. D. Boswell, B. Dräger, J. Eagles, C. McClintock, A. Parr, A. Portsteffen, D. J. Robins, R. J. Robins, N. J. Walton and C. Wong

Specificities of the enzymes of *N*-alkyltropane biosynthesis in *Brugmansia* and *Datura* 871 H. D. Boswell, B. Dräger, W. R. McLauchlan, A. Portsteffen, D. J. Robins, R. J. Robins and N. J. Walton

Cell Culture and Biotechnology

Lignan production by *Ipomoea cairica* callus cultures 879 C. Páska, G. Innocenti, M. Kunvári, M. László and L. Szilágyi

Flavone production in transformed root cultures of *Scutellaria baicalensis* Georgi 885 K. Nishikawa, H. Furukawa, T. Fujioka, H. Fujii, K. Mihashi, K. Shimomura and K. Ishimaru

Chemotaxonomy

Characterization of aroma components of sap from different Indian mango varieties 891 K. Saby John, L. Jagan Mohan Rao, S. G. Bhat and U. J. S. Prasada Rao

Benzopyran derivatives from the aerial parts of *Eriostemon rhomboideus* 895 N. Sultana, J. A. Armstrong and P. G. Waterman

Bioactive Plant Products

Antiplatelet principles from the root of *Petasites formosanus* 901 T.-S. Wu, M.-S. Kao, P.-L. Wu, F.-W. Lin, L.-S. Shi and C.-M. Teng

Plant Chemistry

Long-chain alkanediols, ketoaldehydes, ketoalcohols and ketoalkyl esters in the cuticular waxes of *Osmunda regalis* fronds — 907 R. Jetter and M. Riederer

Two saponins from *Pteleopsis hylodendron* — 917 F. N. Ngounou, Atta-ur-Rahman, M. I. Choudhary, S. Malik, S. Zareen, R. Ali, D. Lontsi and B. L. Sondengam

Hydroquinone diglycoside acyl esters from the leaves of *Myrsine seguinii* — 923 X.-N. Zhong, H. Otsuka, T. Ide, E. Hirata and Y. Takeda

Phenolic constituents of the fern *Phegopteris connectilis* — 929 K.-P. Adam

Dihydroechioidinin, a flavanone from *Andrographis echioides* — 935 B. Jayaprakasam, A. G. Damu, D. Gunasekar, A. Blond and B. Bodo

Peonidin 3-*O*-neohesperidoside and other flavonoids from *Cyclamen persicum* petals — 939 R. F. Webby and M. R. Boase

Polyphenolic metabolites of *Rhamnus disperma* — 943 M. S. Marzouk, S. A. A. El-Toumy, I. Merfort and M. A. M. Nawwar

Homoisoflavonoids and stilbenes from the bulbs of *Scilla nervosa subsp. rigidifolia* — 947 A. Silayo, B. T. Ngadjui and B. M. Abegaz

Isopiperolein B: an alkamide from *Piper nigrum* — 957 P. V. Srinivas and J. M. Rao

Indole and monoterpene alkaloids from the leaves of *Kopsia dasyrachis* — 959 T.-S. Kam, Y.-M. Choo, W. Chen and J.-X. Yao

Erratum

Erratum to "Glycosidic alkaloids from Lupinus varius" — 965 O. B. Abdel-Halim, A. A. El-Gammal, H. Abdel-Fattah and K. Takeya

Number 6

Graphical Abstracts — vii

Growth and Metabolism

Calcium effect on the mycelial cell walls of *Botrytis cinerea* — 967 C. O. Chardonnet, C. E. Sams and W. S. Conway

Purification and characterization of phosphomevalonate kinase from *Catharanthus roseus* — 975 A. E. Schulte, R. van der Heijden and R. Verpoorte

Characterization of NADP-malic enzyme from two species of Chenopodiaceae: *Haloxylon persicum* (C_4) and *Chenopodium album* (C_3) — 985 P. Casati, C. S. Andreo and G. E. Edwards

A fibrinolytic enzyme from a marine green alga, *Codium latum* — 993 K. Matsubara, K. Hori, Y. Matsuura and K. Miyazawa

Inhibition of tyrosinase activity by a polyphenol esterase using selected phenolic substrates — 1001 W. Madani, S. Kermasha and B. Bisakowski

A hysteretic invertase from *Equisetum giganteum* L — 1009 D. P. Leal, M. I. Isla, M. A. Vattuone and A. R. Sampietro

Simultaneous co-suppression of polygalacturonase and pectinesterase in tomato fruit: inheritance and effect on isoform profiles — 1017 H. Simons and G. A. Tucker

Effect of light-irradiation on allelopathic potential of germinating maize — 1023 H. Kato-Noguchi

The natural genetic variation of the fatty-acyl composition of seed oils in different ecotypes of *Arabidopsis thaliana* — 1029 A. A. Millar and L. Kunst

Differential accumulation of isoprenoids in glanded and glandless *Artemisia annua* L — 1035 M. R. Tellez, C. Canel, A. M. Rimando and S. O. Duke

Seasonal variation of neutral and basic taxoid contents in shoots of European Yew (*Taxus baccata*) — 1041 I. Hook, C. Poupat, A. Ahond, D. Guénard, F. Guéritte, M.-T. Adeline, X.-P. Wang, D. Dempsey, S. Breuillet and P. Potier

Ecological Biochemistry

Plocamium hamatum and its monoterpenes: chemical and biological investigations of the tropical marine red alga — 1047 — G. M. König, A. D. Wright and A. Linden

Antifeedant activity of *neo*-clerodane diterpenoids from *Teucrium fruticans* and derivatives of fruticolone — 1055 — M. Bruno, R. Ciriminna, F. Piozzi, S. Rosselli and M. S. J. Simmonds

Increase in gramine content in barley infested by the aphid *Schizaphis graminum* R — 1059 — J. A. Velozo, R. I. Alvarez, G. A. Wächter, B. N. Timmermann and L. J. Corcuera

Cell Culture and Biotechnology

The hydroxylation of the sesquiterpenoid valerianol by *Mucor plumbeus* — 1063 — S. F. Arantes, J. R. Hanson and P. B. Hitchcock

Chemotaxonomy

Chemotyping glucans from lichens of the genus *Cladonia* — 1069 — S. M. Woranovicz-Barreira, P. A. J. Gorin, G. L. Sassaki, C. A. Tischer, T. Ahti and M. Iacomini

Sulfates as novel steroid metabolites in higher plants — 1075 — G. F. Pauli, U. Matthiesen and F. R. Fronczek

Bioactive Plant Products

Bisamides from *Aglaia edulis* — 1085 — E. Saifah, R. Suttisri, S. Shamsub, T. Pengsuparp and V. Lipipun

An immunologically active arabinogalactan from *Tinospora cordifolia* — 1089 — G. Chintalwar, A. Jain, A. Sipahimalani, A. Banerji, P. Sumariwalla, R. Ramakrishnan and K. Sainis

Anti-plasmodial sesquiterpenoids from the African *Reneilmia cincinnata* — 1095 — M. H. K. Tchuendem, J. A. Mbah, A. Tsopmo, J. F. Ayafor, O. Sterner, C. C. Okunjic, M. M. Iwu and B. M. Schuster

Plant Chemistry

Goniothalamusin, a linear acetogenin from *Goniothalamus gardneri* — 1101 — V. Seidel, F. Bailleul and P. G. Waterman

Diterpenoids from *Salvia glutinosa*, *S. austriaca*, *S. tomentosa* and *S. verticillata* roots — 1105 — G. Nagy, G. Günther, I. Máthé, G. Blunden, M.-h Yang and T. A. Crabb

Two triterpenoids from the leaves of *Plumeria obtusa* — 1111 — B. S. Siddiqui, Firdous and S. Begum

Isolation of a new tetranortriterpenoid from the uncrushed green leaves of *Azadirachta indica* — 1117 — T. R. Govindachari, R. Malathi, G. Gopalakrishnan, G. Suresh and S. S. Rajan

New acylated triterpenoid saponins from *Maesa lanceolata* — 1121 — S. Apers, T. E. De Bruyne, M. Claeys, A. J. Vlietinck and L. A. C. Pieters

Saponins from the roots of *Panax notoginseng* — 1133 — W. G. Ma, M. Mizutani, K. E. Malterud, S. L. Lu, B. Ducrey and S. Tahara

A limonoid from *Neobeguea mahafalensis* — 1141 — M. Randrianarivelojosia, M. P. Kotsos and D. A. Mulholland

A phenolic glycoside and *N*-(*p*-coumaroyl)-tryptamine from *Ravensara anisata* — 1145 — J. O. Andrianaivoravelona, C. Terreaux, S. Sahpaz, J. Rasolondramanitra and K. Hostettmann

Sagecoumarin, a novel caffeic acid trimer from *Salvia officinalis* — 1149 — Y. Lu, L. Y. Foo and H. Wong

The novel flavan-3-ol, (2*R*,3*S*)-guibourtinidol and its diastereomers — 1153 — R. J. J. Nel, M. Mthembu, J. Coetzee, H. van Rensburg, E. Malan and D. Ferreira

An unusual isopropenyldihydrofuran biflavanol from *Tephrosia crassifolia* — 1159 — F. Gómez-Garibay, J. S. Calderón, M. De La O Arciniega, C. L. Céspedes, O. Téllez-Valdés and J. Taboada

6-Hydroxyluteolin-7-*O*-*β*-D-[2-*O*-*β*-D-xylosylxyloside]: a novel flavone xyloxyloside from *Hebe stenophylla* — 1165 — K. A. Mitchell, K. R. Markham and M. J. Bayly

Ipecac alkaloids from *Cephaelis acuminata* — 1169 — A. Itoh, Y. Ikuta, Y. Baba, T. Tanahashi and N. Nagakura

Book Reviews

Studies in Plant Science, Vol. 6: Advances in Plant Glycosides, Chemistry and Biology, by Chong-Ren Yang and Osamu Tanaka — 1177 — Y. Mimaki

Phytochemical Signals and Plant-Microbe Interactions, by John T. Romeo, Kelsey R. Downum and Rob Verpoorte 1178 T. Nürnberger

Alkaloids — Biochemistry, Ecology, and Medicinal Applications, edited by M. F. Roberts and M. Wink 1179 J. Schlauer

Microcharacterization of Proteins (2nd edn), edited by R. Kellner, F. Lottspeich and H. E. Meyer 1180 D. Strack

Errata

The flavonoids of *Tanacetum parthenium* and *T. vulgare* and their anti-inflammatory properties [Phytochemistry 51 (1999) 417–423] 1181 C. A. Williams, J. B. Harborne, H. Geiger and J. R. S. Hoult

Folylpolyglutamate synthesis in *Neurospora crassa*: primary structure of the folylpolyglutamate synthetase gene and elucidation of the *met-6* mutation [Phytochemistry 49 (1998) 2221–2232] 1183 I. J. Atkinson, F. E. Nargang and E. A. Cossins

Number 7

Graphical Abstracts vii

Growth and Metabolism

Synthesis and biological activity of 3′-chloro, -bromo, and -iodoabscisic acids, and biological activity of 3′-fluoro-8′-hydroxyabscisic acid 1185 S. Arai, Y. Todoroki, S. Ibaraki, Y. Naoe, N. Hirai and H. Ohigashi

Cytochromes P-450 catalyze the formation of marchantins A and C in *Marchantia polymorpha* 1195 S. Friederich, M. Rueffer, Y. Asakawa and M. H. Zenk

Effectiveness of ascorbate and ascorbate peroxidase in promoting nitrogen fixation in model systems 1203 E. J. H. Ross, S. B. Kramer and D. A. Dalton

Occurrence of bromoperoxidase in the marine green macro-alga, *Ulvella lens*, and emission of volatile brominated methane by the enzyme 1211 T. Ohshiro, S. Nakano, Y. Takahashi, M. Suzuki and Y. Izumi

A cofactor requirement for polygalacturonase from *Cuscuta campestris* 1217 N. B. Nun, A. Mor and A. M. Mayer

Three plant growth inhibiting saponins from *Duranta repens* 1223 S. Hiradate, H. Yada, T. Ishii, N. Nakajima, M. Ohnishi-Kameyama, H. Sugie, S. Zungsontiporn and Y. Fujii

Diurnal fluctuations of the alkaloid concentration in latex of poppy *Papaver somniferum* is due to day–night fluctuations of the latex water content 1229 K. Itenov, P. Molgaard and U. Nyman

Ecological Biochemistry

Trigonelline concentrations in salt stressed leaves of cultivated *Glycine max* 1235 Y. Cho, D. A. Lightfoot and A. J. Wood

Epicuticular wax composition in relation to aphid infestation and resistance in red raspberry (*Rubus idaeus* L.) 1239 T. Shepherd, G. W. Robertson, D. W. Griffiths and A. N. E. Birch

Epicuticular wax ester and triacylglycerol composition in relation to aphid infestation and resistance in red raspberry (*Rubus idaeus* L.) 1255 T. Shepherd, G. W. Robertson, D. W. Griffiths and A. N. E. Birch

Developmental distribution of insect juvenile hormone III in the sedge, *Cyperus iria* L. 1269 J. C. Bede, W. G. Goodman and S. S. Tobe

Cell Culture and Biotechnology

Microbial transformation of $\Delta^{9(15)}$-africanene 1275 Y. Venkateswarlu, P. Ramesh, P. S. Reddy and K. Jamil

The microbiological hydroxylation of 3α,5-cycloandrostanes by *Cephalosporium aphidicola* 1279 C. S. Bensasson, J. R. Hanson and Y. Le Huerou

Anthraquinones from *Isoplexis isabelliana* cell suspension cultures 1283 M. L. Arrebola, T. Ringbom and R. Verpoorte

Effect of *Agrobacterium rhizogenes* T-DNA on alkaloid production in *Solanaceae* plants 1287 E. Moyano, S. Fornalé, J. Palazon, R. M. Cusido, M. Bonfill, C. Morales and M. T. Piñol

Chemotaxonomy

Interspecies variation in floral fragrances emitted by tropical *Ficus* species 1293 L. Grison, A. A. Edwards and M. Hossaert-McKey

Variations in lipophilic and polar flavonoids in the genus *Tanacetum* 1301 C. A. Williams, J. B. Harborne and J. Eagles

Bioactive Plant Products

Antioxidative phenylpropanoids from berries of *Pimenta dioica* 1307 H. Kikuzaki, S. Hara, Y. Kawai and N. Nakatani

Anthocyanin-DNA copigmentation complex: mutual protection against oxidative damage 1313 A. D. Sarma and R. Sharma

Plant Chemistry

Bucharioside and buchariol from *Salvia bucharica* 1319 V. U. Ahmad, M. Zahid, M. S. Ali, A. R. Jassbi, M. Abbas, Z. Ali and M. Z. Iqbal

Sesquiterpenoids, hopanoids and bis(bibenzyls) from the Argentine liverwort *Plagiochasma rupestre* 1323 A. Bardón, N. Kamiya, M. Toyota, S. Takaoka and Y. Asakawa

Three ambrosanolides from *Parthenium hysterophorus* 1331 B. R. Chhabra, J. C. Kohli and R. S. Dhillon

Rearranged clerodane diterpenes from *Tinospora baenzigeri* 1335 P. Tuntiwachwuttikul, N. Boonrasri, J. B. Bremner and W. C. Taylor

A clerodane derivative from *Grangea maderaspatana* 1341 V. Krishna and P. Singh

Pentacyclic triterpenes from *Chuquiraga ulicina* 1345 M. L. Flagg, S. Valcic, G. Montenegro, M. Gomez and B. N. Timmermann

Two C_{21}-steroidal glycosides isolated from *Cynanchum stauntoi* 1351 N. Zhu, M. Wang, H. Kikuzaki, N. Nakatani and C.-T. Ho

Ajugin E and F: Two withanolides from *Ajuga parviflora* 1357 H. R. Nawaz, A. Malik, P. M. Khan and S. Ahmed

Three withanolides from *Withania coagulans* 1361 Atta-ur-Rahman, M. Shabbir, M. Yousaf, S. Qureshi, D. e-Shahwar, A. Naz and M. I. Choudhary

Bibenzyl derivatives from the orchid *Dendrobium amoenum* 1365 P.L Majumder, S. Guha and S. Sen

Xanthones from *Hypericum ascyron* 1371 L.-H. Hu, S.-C. Yip and K.-Y. Sim

Dulxanthone E: a pyranoxanthone from the leaves of *Garcinia dulcis* 1375 S. Kosela, L.-H. Hu, S.-C. Yip, T. Rachmatia, T. Sukri, T. S. Daulay, G.-K. Tan, J. J. Vittal and K.-Y. Sim

C-Glycosidic flavonoids from *Cassia occidentalis* 1379 T. Hatano, S. Mizuta, H. Ito and T. Yoshida

Book Reviews

Modern Fungicides and Antifungal Compounds II, edited by H. Lyr, P. E. Russell, H. W. Dehne and H. D. Sisler 1385 J. B. Harborne

The Atlas of Spectral Data of Sesquiterpene Hydrocarbons, by Daniel Joulain and Wilfried A. König 1385 G. P. Moss

Number 8

Graphical Abstracts ix

Ecological Biochemistry

Release of volatiles during the flowering period of *Hydrosme rivieri* (Araceae) 1387 K. Stránský and I. Valterová

Identification of the bright-greenish-yellow-fluorescence (BGY-F) compound on cotton lint associated with aflatoxin contamination in cottonseed 1391 H. J. Zeringue Jr, B. Y. Shih, K. Maskos and D. Grimm

3-*o*-Methylfunicone, a fungitoxic metabolite produced by the fungus *Penicillium pinophilum* 1399 S. De Stefano, R. Nicoletti, A. Milone and S. Zambardino

Biosynthesis

Isolation and structure elucidation of sabadelin, an acetogenin from roots of *Annona muricata* 1403 C. Gleye, A. Laurens, O. Laprévote, L. Serani and R. Hocquemiller

Biosynthesis of iridoids lacking C-10 and the chemotaxonomic implications of their distribution 1409 L. B. Frederiksen, S. Damtoft and S. R. Jensen

Cell Culture and Biotechnology

Two 6,7-seco-caryophyllenes and an alloaromadendrane from liquid cultures of *Hebeloma longicaudum* 1421 M. Wichlacz, W. A. Ayer, L. S. Trifonov, P. Chakravarty and D. Khasa

ent-Kaurane-type diterpenoids produced by cell culture of the liverwort *Jungermannia subulata* 1427 H. Tazaki, T. Iwasaki, I. Nakasuga, K. Kobayashi, H. Koshino, M. Tanaka and K. Nabeta

Oxoisoaporphines from *Menispermum dauricum* 1431 Y. Sugimoto, H. A. A. Babiker, S. Inanaga, M. Kato and A. Isogai

Chemotaxonomy

Aliphatic pyrrolidine amides from two tropical convolvulaceous species 1437 B. Tofern, P. Mann, M. Kaloga, K. Jenett-Siems, L. Witte and E. Eich

Iridoid glucosides from *Plantago cornuti*, *Plantago major* and *Veronica cymbalaria* 1443 R. Taskova, N. Handjieva, L. Evstatieva and S. Popov

Geranylgeraniol-derived diterpenoids from the brown alga *Bifurcaria bifurcata* 1447 G. Culioli, M. Daoudi, V. Mesguiche, R. Valls and L. Piovetti

Bioactive Plant Products

Diterpenoids from the roots of *Salvia bracteata* 1455 A. Ulubelen, S. Öksüz, U. Kolak, N. Tan, C. Bozok-Johansson, C. Çelik, H.-J. Kohlbau and W. Voelter

Tirucallane triterpenes from *Dysoxylum macranthum* 1461 K. Mohamad, M.-T. Martin, M. Litaudon, C. Gaspard, T. Sévenet and M. Païs

Antibacterial and antifungal flavanones from *Eysenhardtia texana* 1469 G. A. Wächter, J. J. Hoffmann, T. Furbacher, M. E. Blake and B. N. Timmermann

Odoratin 7-*O*-*β*-D-glucopyranoside from *Bowdichia virgilioides* 1473 L. S. M. Velozo, B. P. da Silva, R. R. Bernardo and J. P. Parente

Antibacterial activity of pure flavonoids isolated from mosses 1479 A. Basile, S. Giordano, J. A. López-Sáez and R. C. Cobianchi

Plant Chemistry: Terpenoids

Essential oil of *Coespeletia timotensis* Cuatrec 1483 L. B. Rojas, A. Usubillaga and F. Galarraga

β-Carboline monoterpenoid glucosides from *Palicourea adusta* 1485 J. Valverde, G. Tamayo and M. Hesse

(1*S*,5*R*)-(−)-2,4,4-Trimethylbicyclo[3.1.1]hept-2-en-6-one, from the essential oil of the Ethiopian plant *Laggera tomentosa* 1491 N. Asfaw, H. J. Storesund, L. Skattebøl and A. J. Aasen

Premnaodorosides D–G: acyclic monoterpenediols iridoid glucoside diesters from leaves of *Premna subscandens* 1495 H. Sudo, A. Takushi, E. Hirata, T. Ide, H. Otsuka and Y. Takeda

Gymnomitrane-type sesquiterpenes of the liverworts *Gymnomitrion obtusum* and *Reboulia hemisphaerica* 1501 U. Warmers and W. A. König

Furanoeremophilane derivatives from *Senecio flavus* 1507 P. Torres, J. Ayala, C. Grande, J. Anaya and M. Grande

New sesquiterpenoids from *Achillea clypeolata* 1515 M. N. Todorova and E. T. Tsankova

(−)-7-*epi*-Isojunenol and (+)-7-*epi*-junenol, constituents of the liverwort *Tritomaria quinquedentata* 1519 U. Warmers and W. A. König

Terpenoids and aromatic compounds from *Daphne oleoides* ssp. *oleoides* 1525 H. Taninaka, Y. Takaishi, G. Honda, Y. Imakura, E. Sezik and E. Yesilada

Clerodane diterpenes from *Haplopappus deserticola* 1531 E. Tojo, M. E. Rial, A. Urzua and L. Mendoza

Clerodane diterpenoids from *Salvia blepharophylla* 1535 A. Bisio, N. Fontana, G. Romussi, G. Ciarallo, N. De Tommasi, C. Pizza and A. Mugnoli

Neo-clerodane diterpenoids from *Ajuga pseudoiva* leaves 1541 H. B. Jannet, A. Chaari, Z. Mighri, M. T. Martin and A. Loukaci

Diterpenes from *Haplopappus chrysanthemifolius* 1547 F. Faini, C. Labbé, R. Torres, F. Delle Monache and G. Delle Monache

Terpenoid from the liverwort *Scapania bolandeli* 1551 H. Tazaki, T. Hayashida, T. Furuki and K. Nabeta

Diterpenoids from the fruits of *Vitex agnus-castus* 1555 E. Hoberg, J. Orjala, B. Meier and O. Sticher

Three rearranged 2(3→20) *abeo*taxanes from the bark of *Taxus mairei*	1559	Q.-W. Shi, T. Oritani and T. Sugiyama
Taxane diterpenoids from the seeds of Chinese yew *Taxus chinensis*	1565	Y.-C. Shen, Y.-J. Chen and C.-Y. Chen
Two novel pseudoalkaloid taxanes from the Chinese yew, *Taxus chinensis* var. *mairei*	1571	Q.-w. Shi, T. Oritani, T. Sugiyama and T. Yamada
A taxoid from the needles of the Japanese yew, *Taxus cuspidata*	1577	R. Murakami, Q.W. Shi and T. Oritani
Two serratane triterpenes from the stem bark of *Picea jezoensis* var. *hondoensis*	1581	R. Tanaka, K. Tsujimoto and S. Matsunaga
Triterpenes with a new 9-epi-cucurbitan skeleton from *Senecio selloi*	1587	G. Rücker, D. Manns, E. P. Schenkel, R. Hartmann and B. M. Heinzmann
Absolute configurations of two acyclic triterpenoids from *Ekebergia capensis*	1593	Y. Nishiyama, M. Moriyasu, M. Ichimaru, A. Kato, S. G. Mathenge, J. N. Nganga and F. D. Juma
Isolation and structure determination of three epoxidized iridals from *Iris cristata*	1597	L. Taillet, J-P. Bonfils, F-J. Marner and Y. Sauvaire
(24*R*)- and (24*S*)-24-hydroxy-24-vinyllathosterols and other sterols from the aerial part of *Bryonia dioica*	1601	T. Akihisa, Y. Kimura, K. Koike, W. C. M. C. Kokke, T. Ohkawa and T. Nikaido
24-*Epi*-secasterone and 24-*epi*-castasterone from *Lychnis viscaria* seeds	1607	A. Friebe, A. Volz, J. Schmidt, B. Voigt, G. Adam and H. Schnabl
Furostanol saponins from *Allium tuberosum*	1611	S. Sang, A. Lao, H. Wang and Z. Chen
A triterpenoid saponin isolated from *Lafoensia glyptocarpa*	1617	G. J. A. de Carvalho, M. G. de Carvalho and R. Braz-Filho
Steroids from the fungus *Fomitopsis pinicola*	1621	J. Rösecke and W. A. König
Plant Chemistry: Phenolics		
1-*O*-galloyl-α-l-rhamnose from *Acer rubrum*	1629	M. M. Abou-Zaid and C. Nozzolillo
Sesquiterpene lactones and bisbibenzyl derivatives from the neotropical liverwort *Frullania convoluta*	1633	M. Flegel, K.-P. Adam and H. Becker
Bibenzyls and bisbibenzyls from a neotropical *Plagiochila* species	1639	H. Anton, R. Schoeneborn and R. Mues
Lignans from the liverworts *Lepidozia incurvata*, *Chiloscyphus polyanthos* and *Jungermannia exsertifolia* ssp. *cordifolia*	1647	F. Cullmann, A. Schmidt, F. Schuld, M. L. Trennheuser and H. Becker
Lignans from the liverwort *Lepicolea ochroleuca*	1651	F. Cullmann and H. Becker
Aryl naphthalenes norlignans from *Vitex rotundifolia*	1657	K. Kawazoe, A. Yutani and Y. Takaishi
Oligomeric hydrolysable tannins from *Tibouchina multiflora*	1661	T. Yoshida, Y. Amakura, N. Yokura, H. Ito, J. H. Isaza, S. Ramirez, D. P. Pelaez and S. S. Renner
5-Methyl coumarins and a new phenol from *Nassauvia pyramidalis* and *N. digitata*	1667	M. Hoeneisen, V. Hernandez, J. Becerra, M. Silva, M. Bittner and J. Jakupovic
Coumarins and dihydrocinnamic acid derivatives from *Micromelum falcatum*	1671	C. Kamperdick, N. M. Phuong, T. V. Sung, J. Schmidt and G. Adam
A new *C*-glycosyl xanthone isolated from *Davallia solida*	1677	S. Rancon, A. Chaboud, N. Darbour, G. Comte, D. Barron, J. Raynaud and P. Cabalion
Dihydroflavonols and flavanones from *Lonchocarpus atropurpureus* roots	1681	A. F. Magalhães, A. L. T. G. Ruiz, A. M. G. A. Tozzi and E. G. Magalhães
Anthocyanin pigments of tulips	1687	K. Torskangerpoll, T. Fossen and Ø. M. Andersen
Anthocyanins in blue berries of *Vaccinium padifolium*	1693	L. Cabrita and Ø. M. Andersen
Cyanidin 3-(2″,3″-digalloylglucoside) from red leaves of *Acer platanoides*	1697	T. Fossen and Ø. M. Andersen
Flavonoid glucuronides from *Picria fel-terrae*	1701	Y. Huang, T. De Bruyne, S. Apers, Y. Ma, M. Claeys, L. Pieters and A. Vlietinck
Prenylated flavones from *Neoraputia paraensis*	1705	J. P. I. de Souza, A. C. Arruda, G. D. Muñoz, M. S. P. Arruda and A. H. Müller

Plant Chemistry: Alkaloids

Glypetelotine, a sulphur-containing indole alkaloid from *Glycosmis petelotii* 1711 N. M. Cuong, W. C. Taylor and T. Van Sung

A novel alkaloid from *Fluggea virosa*: 14,15-epoxynorsecurinine 1715 E. V. Dehmlow, M. Guntenhöner and T. V. Ree

Two macrocyclic spermine alkaloids from *Aphelandra fuscopunctata* (Acanthaceae) 1717 N. Youhnovski, S. Filipov, A. Linden, A. Guggisberg, C. Werner and M. Hesse

β-Carboline alkaloids from *Hedyotis capitellata* 1725 N. M. Phuong, T. Van Sung, A. Porzel, J Schmidt, K. Merzweiler and G. Adam

Two alkaloids from Chinese bittersweet *Celastrus angulatus* 1731 W.-P. Yin, T.-Z. Zhao, L.-J. Gao, D.-P. Zou, H.-M. Liu and J.-X. Kang

Sesquiterpene evoninate alkaloids from *Tripterygium hypoglaucum* 1735 H. Duan and Y. Takaishi

Cyclopeptide alkaloids from *Heisteria nitida* 1739 H. R. El-Seedi, S. Gohil, P. Perera, K. B. G. Torssell and L. Bohlin

Megistosarcimine and megistosarconine, two alkaloids from *Sarcomelicope megistophylla* 1745 N. Fokialakis, S. Mitaku, E. Mikros, A.-L. Skaltsounis, F. Tillequin and T. Sevenet